

CLAIMS

1. A voltage and/or surge-current protector and grounding bar arrangement for use with a BIX connector block, comprising in combination:

5 a BIX connector block having two rows of terminals which are laterally spaced apart with respect to each other so as to form a longitudinally extending channel therebetween;

a grounding bar disposed within said longitudinally extending channel defined between said two laterally spaced rows of terminals and having a plurality of holes defined therein;

a housing;

15 voltage and/or surge-current protector means disposed within said housing;

a plurality of tip/ring terminal contacts disposed within said housing for mating with opposed terminals of said BIX connector block, disposed upon opposite sides of said longitudinally extending channel, when said housing is mounted upon said BIX connector block; and

20 ground contact means disposed within said housing for connection to said voltage and surge-current protector means and to one of said plurality of holes defined within said grounding bar.

2. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 1, wherein said housing includes a pair of co-mating front and back halves.

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3. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 1, wherein said voltage and/or surge-current protector means comprises a pair of voltage suppressor means and a pair of sneak-current fuses so as to provide over-voltage and over-current protection for said BIX connector block.

4. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 1, wherein said voltage and/or surge-current protector means comprises rectifying means, a pair of voltage suppressor means, and a pair of sneak-current fuses so as to provide over-voltage and over-current protection for said BIX connector block.

5. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 1, wherein said voltage and/or surge-

current protector means comprises a pair of voltage suppressor means so as to provide over-voltage protection for said BIX connector block.

6. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 1, wherein said voltage and/or surge-current protector means comprises a pair of sneak-current fuses so as to provide over-current protection for said BIX connector block

7. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 3, wherein said pair of voltage suppressor means comprises a pair of silicon avalanche suppressors.

8. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 4, wherein said rectifying means comprises a diode bridge rectifier and said pair of voltage suppressor means comprises a pair of silicon avalanche suppressors.

9. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 1, further comprising disconnect means disposed within said housing for allowing testing and line-servicing without removal of said voltage and/or surge current protector means from said BIX connector block.

10. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 9, wherein said disconnect means comprises a long disconnect terminal contact, a short disconnect terminal contact, and a spring contact, said spring contact urging 5 said short disconnect terminal contact into contact engagement with said long disconnect terminal contact when no testing is being performed.

11. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 1, wherein an upper portion of said housing has a test port for receiving therein a test probe for permitting testing.

12. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 1, wherein an upper portion of said housing has a recess for receiving therein a label strip so as to allow for single pair identification of up to 25 terminal-pairs which 5 is visible without removal of said voltage and/or surge-current protector means from said BIX connector block.

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13. A voltage and/or surge-current protector and grounding bar arrangement for use with a BIX connector block, comprising in combination:

5 a BIX connector block having two rows of terminals which are laterally spaced apart with respect to each other so as to form a longitudinally extending channel there-between;

grounding bar means disposed within said longitudinally extending channel defined between said two laterally spaced rows of terminals and having a plurality of holes defined therein;

a housing;

voltage and/or surge-current protector means disposed within said housing;

15 a plurality of tip/ring terminal contacts disposed within said housing for mating with opposed terminals of said BIX connector block, disposed upon opposite sides of said longitudinally extending channel, when said housing is mounted upon said BIX connector block;

20 ground contact means disposed within said housing for connection to said voltage and surge-current protector

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means and to one of said plurality of holes defined within said grounding bar means; and

25 disconnect means disposed within said housing for allowing testing and line-servicing without removal of said voltage and/or surge-current protector means from said BIX connector block.

14. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 13, wherein said disconnect means comprises a long disconnect terminal contact, a short disconnect terminal contact, and a spring contact, said spring contact urging said short disconnect terminal contact into contact engagement with said long disconnect terminal contact when no testing is being performed.

15. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 13, wherein an upper portion of said housing has a test port for receiving therein a test probe for permitting testing.

16. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 13, wherein an upper portion of said housing has a recess for receiving therein a label strip so as to

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allow for single pair identification of up to 25 terminal-pairs which  
5 is visible without removal of said voltage and/or surge-current pro-  
tector means from said BIX connector block.

17. A voltage and/or surge-current protector and grounding bar  
arrangement as claimed in Claim 13, wherein said voltage and/or surge-  
current protector means comprises a pair of voltage suppressor means  
and a pair of sneak-current fuses so as to provide over-voltage and  
5 over-current protection for said BIX connector block.

18. A voltage and/or surge-current protector and grounding bar  
arrangement as claimed in Claim 13, wherein said voltage and/or surge-  
current protector means comprises rectifying means, a pair of voltage  
suppressor means, and a pair of sneak-current fuses so as to provide  
over-voltage and over-current protection for said BIX connector block.

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19. A voltage and/or surge-current protector and grounding bar arrangement for use with a BIX connector block, comprising:

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a BIX connector block having two rows of terminals which are laterally spaced apart with respect to each other so as to form a longitudinally extending channel there-between;

a grounding bar including an elongated flat horizontal intermediate section and a pair of terminal end sections integrally connected to the opposite ends of said intermediate section;

10 said grounding bar being disposed within said longitudinally extending channel defined between said two laterally spaced rows of terminals, said two laterally spaced rows of terminals in said intermediate section having a plurality of holes defined therein; and

15 protuberances located at ends of said BIX connector block for receiving therein corresponding vertical offsets on said terminal end portions of said grounding bar.

20. A voltage and/or surge-current protector and grounding bar arrangement as claimed in Claim 19, wherein rectangularly-shaped apertures formed above and below said vertical offset through which

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said protuberances extend for fixedly securing said grounding bar  
5 within said longitudinally extending channel.